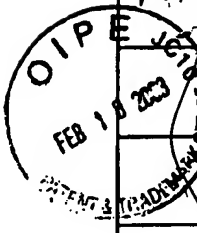


Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO				Complete if Known		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Application Number	10/025,818	
				Filing Date	12/18/2001	
				First Named Inventor	Tzalenchuk et al.	
				Art Unit	2811	
				Examiner Name	Not Yet Assigned	
Sheet	1	of	2	Attorney Docket Number	11090-048-999	
U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No. ¹	Document Number Number - Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Filing Date	
DA	AA	5,157,466	08-20-1997	Char et al.		
	AB	5,768,297	06-16-1998	Shor		
	AC	5,917,322	06-29-1999	Gershenfeld et al.		
	AD	6,459,097 B1	10-01-2002	Zagoskin		
	AE	6,495,854 B1	12-17-2002	Newns et al.		
	AF	6,504,172 B2	01-07-2003	Zagoskin et al.		
	AG	20020117656A1	08-29-2002	Amin et al.		
	AH	20010020701A1	09-13-2001	Zagoskin		
	AI	20020188578A1	12-12-2002	Amin et al.		
	AJ	09/823,895		Amin et al.	March 31, 2001	
	AK	10/006,787		Tzalenchuk et al.	December 6, 2001	
FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No. ¹	Foreign Patent Document Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
	AL	WO02/069411 A2	09-06-2002	D-Wave Systems, Inc.		
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)						
	AM	G. Blatter, V.B. Geshkenbein, and L. Ioffe, "Engineering Superconducting Phase Qubits", ArXiv.org: cond-mat/9912163, pp. 1-8, (1999), accessed November 15, 2002.				
	AN	D. Born, T. Wagner, W. Krech, U. Hubner, and L. Fritzch, "Fabrication of Ultrasmall Tunnel Junctions by Electron Beam Direct-Writing", IEEE Transactions on Applied Superconductivity, 11, 373 (March 2001).				
	AO	Borisenko, P. Mozhaev, G. Ovsyannikov, and K. Constantinian, "Superconducting Current-Phase Dependence in High-T _c Symmetrical Bicrystal Junctions", SQUID 2001 conference proceedings (September 2, 2001) also as Physica C 368, pp. 328-331 (2002).				
	AP	H. Hilgenkamp, J. Mannhart, and B. Mayer, "Implications of dx ₂ -y ₂ symmetry and faceting for the transport properties of grain boundaries in high-T _c superconductors", Physical Review B 53, pp. 14586-14593 (1996).				

	AQ	E. Il'ichev, M. Grajcar, R. Hlubina, R. Ijssesteijn, H. Hoenig, H. Meyer, A. Golubov, M. Amin, A. Zagoskin, A. Omelyanchouk, and M. Kupriyanov, "Degenerate Ground State in a Mesoscopic $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ Grain Boundary Josephson Junction", Physical Review Letters 86, pp. 5369-5372 (2001).
	AR	P Joyez, P. Lafarge, A. Filipe, D. Esteve, and M. H. Devoret, "Observation of Parity-Induced Suppression of Josephson Tunneling in the Superconducting Single Electron Transistor", Physical Review Letters 72, pp. 2458-2461 (1994).
	AS	D. Koelle, R. Kleiner, F. Ludwig, E. Dantsker and John Clark, "High-transition-temperature superconducting quantum interference devices", Reviews of Modern Physics 71, pp. 631-686 (1999).
	AT	D. Lidar, and L. Wu, "Reducing Constraints on Quantum Computer Design by Encoding Selective Recoupling", ArXiv.org: quant-ph/0109021 version 2, pp. 1-5 (2001), accessed January 17, 2003.
	AU	Y. Makhlin, G. Schön, and A. Shnirman, "Quantum-State Engineering with Josephson-Junction Devices", Reviews of Modern Physics 73, pp. 357-400 (2001).
	AV	J.E. Mooij, T.P. Orlando, L. Levitov, L. Tian, C.H. van der Wal, and S. Lloyd, "Josephson Persistent-Current Qubit", Science 285, pp.1036-1039 (1999).
	AW	S. Nicoletti, H. Moriceau, J.C. Villegier, D. Chateigner, B. Bourdeaux, C. Cabanel, and J. Y. Laval, "Bi-epitaxial YBCO grain boundary Josephson junctions on SrTiO_3 and sapphire substrates", Physica C 269, pp.255-267 (1996).
	AX	R.C. Rey-de-Castro, M.F. Bocko, A.M. Herr, C.A. Mancini, and M.J. Feldman, "Design of an RSFQ Control Circuit to Observe MQC on an rf-SQUID", IEEE Transactions on Applied Superconductivity 11, pp. 1014-1017 (2001).
	AY	R.R. Schulz, B. Chesca, B. Goetz, C.W. Schneider, A. Schmehi, H. Bielefeldt, H. Hilgenkamp, J. Mannhart, and C.C. Tsuei, "Design and realization of an all d-wave dc-superconducting quantum interference device", Applied Physics Letters 76, pp. 912-914 (2000).
	AZ	R.J. Schoelkopf, P. Wahlgren, A.A. Kozhevnikov, P. Delsing, and D.E. Prober, "The Radio-Frequency Single-Electron Transistor (RF-SET): A Fast and Ultrasensitive Electrometer", Science 280, pp. 1238-1242 (1998).
BA	F. Tafuri, F. Carillo, F. Lombardi, F. Miletto Granozio, F. Ricci, U. Scotti di Uccio, A. Barone, G. Testa, E. Sarnelli, J.R. Kirtley, "Feasibility of Biepitaxial YBaCuO Josephson Junctions for Fundamental Studies and Potential Circuit Implementation", ArXiv.org: condmat/0010128 (2000), accepted for publication Phys. Rev. B, accessed December 18, 2002.	
BB	C. C. Tsuei and J. R. Kirtley, "Pairing symmetry in cuprate superconductors", Reviews of Modern Physics 72, Issue 4, pp. 969-1016 (2000).	
BC	D. J. Van Harlingen, "Phase-sensitive tests of the symmetry of the pairing state in the high-temperature superconductors—Evidence for $d_{x^2-y^2}$ symmetry", Reviews of Modern Physics 67, 515-535 (1995).	
BD	C. H. van der Wal, A. C. J. ter Haar, F. K. Wilhelm, R. N. Schouten, C. J. P. M. Harmans, T. P. Orlando, S. Lloyd, and J. E. Mooij, "Quantum Superposition of Macroscopic Persistent-Current States", Science, 290, pp. 773-777 (2000).	
Examiner Signature	<i>Douglas Wells</i>	
Date Considered	21 Jan 04	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.